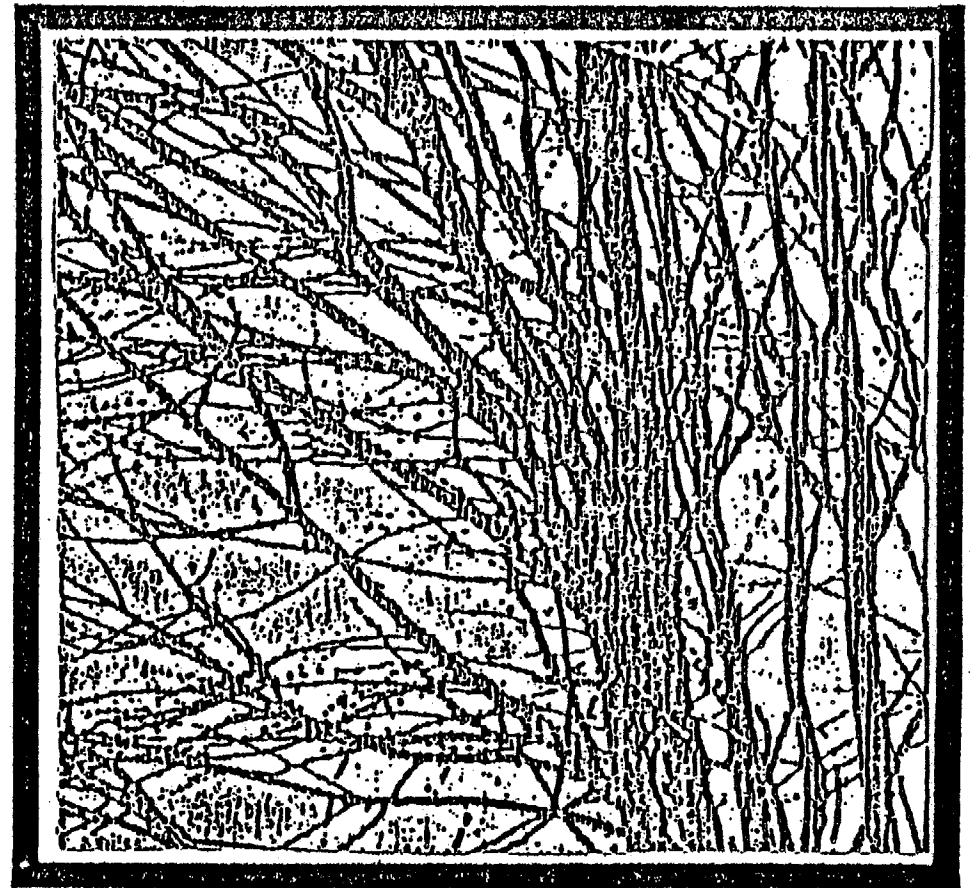


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Coastal Zone Management Plan 1975

Prepared by
City Planning Commission
New Orleans, Louisiana

VOLUME 3 - SUMMARY REPORT

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COASTAL ZONE MANAGEMENT PLAN

For The

CITY OF NEW ORLEANS

VOLUME III

SUMMARY VOLUME

MAYOR AND CITY COUNCIL OF NEW ORLEANS

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ACKNOWLEDGEMENT

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The Planning Commission also wishes to thank all those agencies, organizations and individuals providing comments and advice in connection with this report.

PREFACE

This report was prepared to guide the City of New Orleans in the attainment of the following goals:

1. The maintenance of a high level of quality within estuary areas in the City of New Orleans;
2. the formulation of land use policies and management techniques appropriate to marsh-estuary areas;
3. the formulation of an energy policy which does not adversely impact the environment;
4. the provision of adequate open space and recreational areas for the benefit of the citizens of the City of New Orleans, and the State of Louisiana;
5. to protect and maintain in perpetuity, the economic and ecologic resources of the natural environment;
6. coordination of governmental agencies, in the management of sensitive environmental areas; and,
7. the establishment of land use guidelines and development priorities in estuary areas.

In order to receive as much input as possible from governmental agencies, civic groups, and the general public, this plan is being circulated to the agencies and organizations listed below and is available to the general public upon request. Prior to official consideration of this plan, at least one public hearing will be held.

Agencies and Organizations from whom comments have been solicited:

Mayor, City of New Orleans
New Orleans City Council
Forest Service, U. S. Department of Agriculture
U. S. Army, Corps of Engineers
Office of Coastal Environments, National Oceanic and Atmospheric Administration
Bureau of Outdoor Recreation, U. S. Department of Interior
Bureau of Sport Fisheries and Wildlife, U. S. Department of Interior
Louisiana Society of Landscape Architects
Louisiana Air Control Commission
Environmental Protection Unit, Louisiana Attorney General's Office
Louisiana Conservation Department

Louisiana Stream Control Commission
Louisiana Chapter, American Institute of Planners
Metropolitan New Orleans, Section, American Institute of Planners
American Society of Planning Officials
Sierra Club, Delta Chapter
Ecology Center of Louisiana, Inc.
Environmental Committee, Goals for Louisiana
Department of Environmental Affairs, University of New Orleans
New Orleans, Center for Housing and Environmental Law
Tulane University, Environmental Action Committee
Coastal Resources Unit, Center of Wetland Resources, Louisiana State University
Engineering Sciences Environmental Center, Tulane University School of Engineering
Department of Environmental Health Sciences, Tulane University of Public Health and Tropical Medicine
Chamber of Commerce of the Greater New Orleans Area
Regional Planning Commission of Jefferson, Orleans, St. Bernard and St. Tammany Parishes
State of Louisiana, Office of State Planning
New Orleans Junior Chamber of Commerce
Young Men's Business Club of New Orleans
Louisiana State Parks and Recreation Commission
New Orleans City Council, Budget Analyst and Research
New Orleans Chief Administrative Office
New Orleans Department of Electronic Data Processing
New Orleans Department of Finance
New Orleans Department of Fire
New Orleans Department of Law
New Orleans Department of Police
New Orleans Office of Policy Planning and Analysis
New Orleans Department of Property Management
New Orleans Department of Recreation
New Orleans Department of Safety & Permits
New Orleans Department of Sanitation
New Orleans Department of Streets
New Orleans Department of Utilities
New Orleans Department of Welfare
New Orleans Office of Civil Defense
New Orleans Board of Health
Board of Commissioners Orleans Levee District
Board of Commissioners Port of New Orleans
Orleans Parish School Board
Public Library Board
Sewerage & Water Board
Audubon Park Commission
Civil Service Commission

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1

Introduction.

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Volumes I and II described the geologic development of Southern Louisiana including the area upon which the City of New Orleans is situated. Over a period of 5,000 years, the Mississippi River deposited its load of silts and clays which formed natural levee ridges and adjacent swamps and marshes.

Prehistoric Indians, the first men to inhabit the area, left archaeological evidence of their tenure on the natural levee ridges. Just as the colonists did after them, both lived off of the abundance of seafood and wildlife of Lakes Pontchartrain and Borgne, and connecting estuarine marsh areas which surrounded these limited grounds.

Since the French founded the City of New Orleans in 1718, the City has steadily extended its limits from the natural levee ridges into once productive swamps and marshes. These areas were not well suited for development because of poor soils and drainage. Likewise, while swamps and marshes were developed, valuable habitat for fish and wildlife disappeared potentially endangering the future of the city's seafood and sport industry and correspondingly the City's unique lifestyle.

Although productive estuarine areas have been lost due to urbanization, housing and economic opportunities have been created for the New Orleans populace. At the same time, it is the development of former marsh and swamp areas which has in part produced the unique New Orleans life style. New Orleans is now to the point that urbanization and environmental protection must be balanced in the public interest.

Today, little remains of the natural setting of the pre-Victorian City of New Orleans. Yet, that which remains is a highly viable and productive ecosystem which is a part of the Lakes Maurepas-Pontchartrain-Borgne estuary complex. The map on the following page depicts the relationship of the City of New Orleans to this estuary complex. This estuary complex yields approximately 25% of Louisiana's fisheries harvest. This fact is especially significant because Louisiana's coastal marshes produce approximately one-third of the nation's fisheries harvest.


It is important therefore, that the City of New Orleans, the State of Louisiana and the nation formulate management programs to ensure that productive estuarine areas, especially those described above, and other natural areas, maintain their ecological integrity. Equally important is the need to accommodate additional growth in a planned and managed manner that will be responsive to the balanced needs of the City and the affected natural areas.

Although the primary emphasis of this report deals with coastal zone issues, they must be considered in balance with social, economic and other factors as well as in the total environmental setting. This total view reflects the following four major considerations.

1. The need to expand the economic base of the City of New Orleans. This need is attested to in the Community Renewal Program prepared under the auspices of the City Planning Commission with the assistance of Larry Smith & Company. Additionally, the city's economic problems have been restated by Dr. James Bobo in his recent study entitled, "The New Orleans Economy; Pro Bono Publico".
2. The need to provide additional flood protection for both residents and property owners of the City of New Orleans. This need is being pursued in accordance with plans, or modifications thereof, as prepared by the U.S. Corps of Engineers concerning flood protection in the New Orleans Metropolitan area.
3. The need to retain and increase middle income families within the Central City area of New Orleans. Failure to achieve this would mean the continuation of a declining central city population with an increasing percentage of lower income and elderly families who would demand increased services. Declining central cities also become target areas of heavy traffic and crime as reported in the study entitled "Growing and Declining Urban Areas: A Fiscal Comparison" published by the Land Institute and prepared by Thomas Muller.
4. The need to avoid the uncontrolled urban sprawl phenomenon. Costs associated with sprawl are documented in HUD's publication "The Cost of Sprawl". This need can be met by developing a reasonably compact urban area. In the case of New Orleans this could be accomplished by both preservation and rehabilitation of the older city and limited expansion to accommodate new growth, both in population and in economic opportunities. Therefore, in order for urban areas to remain viable it is imperative that new areas be allowed to develop in order to allow for controlled residential and industrial expansion.

The region has not seen urban sprawl in any degree comparable to other communities due to the fact that transportation requirements and reclamation processes have tended to limit this phenomenon. However, some symptoms of this have been occurring on the Mississippi Gulf Coast and the Florida and river parishes. Failure to provide for this growth in a contained and managed urban pattern will encourage sprawl with possibly a more debilitating effect on the total environment.

The remaining sections of this report discuss the developmental and environmental needs of the City of New Orleans and will outline specific recommendations for accomplishing the goals expressed in the Preface to this report within the constraints contained in this chapter.



2 Problems & Solutions

Volumes I and II of this study demonstrated that the New Orleans area has an abundance of natural resources. These resources, in turn, present both natural constraints and challenging opportunities to the community. The extent to which the community is dedicated to the task of conserving and properly managing its resources will determine how well it responds to existing natural constraints and how well it takes advantage of its limitless opportunities. Foremost among the tasks at hand are properly identifying, measuring and solving the major problems which threaten to limit or destroy these natural resources. Problems such as unstable soils, water pollution, erosion, flood potential, destruction of archaeological sites, to mention but a few, are well documented and require immediate attention. Some of these problems require intermediate or longer range approaches. Additionally, some problems must be dealt with by both short and long term actions.

The following sections define the problems derived from this study and propose remedial actions. All these recommendations must be pursued with equal diligence if New Orleans is to effectively solve its major environmental problems. If left unattended, these problems may intensify and threaten future remedial attempts-actions which may prove more difficult and costly.

This report presents both the problems and recommendations in text and in illustrative map form as well. These maps are contained in the envelope at the rear of the report. The reader is urged to review these maps in conjunction with the text for maximum understanding of this material.

The following is a list of major problems identified by this study and recommendations dealing with those problems. Though in sequential form, no priority ranking of those problems is intended.

PROBLEM: Lake Pollution

Pollution of the water in Lake Pontchartrain is a problem affecting both wildlife and consumers of wildlife. Furthermore, pollution of the lake is a potential hazard to the health of swimmers and thus limits the lake's use as a recreational resource. Three major sources of lake pollution have been identified; they are:

- a) camps lacking adequate sewage disposal systems,
- b) municipal storm water discharges from urban drainage systems, and,
- c) direct sewage and other contaminate discharges from boats.

A. FISHING CAMPS:

The problem associated with the camps is that they are not connected to municipal sewerage facilities and usually do not have approved alternative sewage disposal systems. For reasons expressed in this report, the camp problem is presented in three areas as follows:

Area I

Those camps located along Hayne Boulevard between the Lakefront Airport and Paris Road are located on public property and thus limit public access to lake waters. The Board of Commissioners of the New Orleans Levee District has already adopted a policy prohibiting the issuance of permits for additional camp construction. Although this is a significant action, it does not alleviate the current problem. There are two options available within the general police powers of the various public agencies to obtain relief. The first would consist of a mandatory requirement that each camp be connected to the municipal sewerage system which is available in the area; the second alternative would be to require the removal of these camps.

Area I - Recommendation:

In view of the public ownership of the land, the emerging development of the Lake Forest area and a corresponding increase in demand for a variety of recreational opportunities, the Board of Commissioners of the Orleans Levee District should notify and grant all camp owners an eighteen (18) month period in which to terminate the use of, and remove, said camps.

Area II

A second area of camps is located along and in the wetlands adjacent to U.S. Highways 11 and 90. It should be recognized that these camps serve either as residences or as recreational structures unique to this area. This characteristic should not be eliminated. Yet, unless modified, it will continue to have a detrimental effect on the wetlands through the direct discharge of untreated sewage into the wetlands and associated waterways. Additionally, uncontrolled expansion of fishing camp communities into these wetlands, even with proper sewage disposal facilities, could have a detrimental effect. This issue will be dealt with more extensively in a later section of this report.

Options available to solve the pollution caused by existing camps in wetland areas include either the provision of municipal sewerage facilities (possibly a very expensive option), demolition of the camps, or the placement of holding tanks to service individual structures, or other acceptable forms of technology (e.g. facilities such as incinerator toilets, which cost between \$300 and \$900, and which eliminate the most prominent source of lake pollution).

Untreated sewage discharge is not unique to the City of New Orleans but is readily observable in many of the parishes within the total estuary system. Therefore, the prime responsibility for correction of such a problem should rest with the State of Louisiana. State programs should reflect strenuous regulatory measures for all similar conditions

In all parishes and programs of relief, as well as enforcement, should likewise be applied equitably.

Area II - Recommendations:

Within six months the Louisiana Health and Human Resources Administration and the New Orleans Sewerage and Water Board should determine which camps can be served by existing sewers and into which areas existing sewers can be reasonably extended. Where connections to existing sewer lines can be realized, financial provisions should be made to extend such facilities to ensure that the camps would connect with the provided sewer lines. Provision of sewer facilities for this area of New Orleans alone is estimated at \$3,562,000. This burden should not be imposed on one parish and not on other parishes. Therefore the State should adopt both regulations as well as a financial assistance program and ensure implementation. Financing of sewer connections should be accomplished in an equitable manner. Where such provisions cannot be accomplished, the Louisiana Health and Human Resources Administration should, within the same six month period, establish the specifications for an incinerator type disposal system, or other acceptable technology, and within one year the Building Code of the City of New Orleans as well as those of other parishes should be amended to require all new construction in areas not serviceable by public sewers to include such a disposal technology and to require existing structures to be retrofitted with such facilities. Where sewer facilities are available, camp owners should be required to connect with sewer lines, at their own expense, within one year or be required to remove their structure.

Area III

A third area of camps is located along the south shore of Lake Pontchartrain adjacent to the Southern Railroad right-of-way between Point Aux Herbes and Paris Road. These camps share the characteristics of those camps in both Areas I and II. Like the camps in Area I, these camps lack approved sewerage disposal systems and therefore contribute to the pollution of Lake Pontchartrain. As is the case with the camps in Area II, many of those camps are located on private property. However, as the City continues to develop, greater benefit may accrue to the public if the area is brought under public ownership. Area I is adjacent to the now developing Lake Forest area, and therefore is immediately needed for recreational purposes. Area III, while now being relatively inaccessible, will be needed for recreational purposes in the future as New Orleans East develops. Until New Orleans East develops however, Area III camps can be allowed to remain provided that pollution emanating from these camps is abated.

Area III - Recommendation:

Because Area III is somewhat unique as compared to Areas I and II both short and long range recommendations are made. The goal of these recommendations is to allow continuance of these camps until such time as their sites are required for public purposes.

The Louisiana Health and Human Resources Administration should, within a six month period, establish the specifications for an incinerator disposal system or other acceptable technology and within one year the building code of the City of New Orleans should be amended to require installation of the acceptable sewerage disposal device.

In the long term, the area in which these camps are located should be acquired for public purposes.

B. STORM WATER:

Storm water discharges carry into Lake Pontchartrain a variety of pollutants from developed areas in both Orleans Parish and other parishes surrounding Lake Pontchartrain. Most notable of these pollutants are fecal bacteria and viruses indicated by the presence of high concentrations of *E. Coli* bacteria. As in the case of camps, fecal bacteria creates health hazards and limit the recreational and food production values of Lake Pontchartrain.

The Sewerage and Water Board of the City of New Orleans instituted a program to treat storm water on an experimental basis in the London and Orleans Avenue Canals, the Seventeenth Street Canal and at the St. Charles Canal. Cost of the program was borne by a demonstration grant obtained from the U.S. Environmental Protection Agency. This cost was approximately \$706,500, excluding the cost of chemicals, and was conducted over a six year period. The program met with a reasonable level of success; however, curtailment of the federal funds led to the discontinuance of the project. Here again this source of pollution is not limited to Orleans Parish but applies to all parishes lying within the estuary system.

Recommendations:

The State of Louisiana, through the Louisiana Health and Human Resources Administration, should within one year, adopt strenuous regulations and a program to preclude biological pollutants from entering the Lake Pontchartrain Basin through storm drainage systems. Responsibility for compliance should be on each local parish or be assumed solely by the State of Louisiana. The cost for such a program in Orleans Parish alone is estimated at \$7,500,000 annually assuming existing outfall canals can be used without modification. This figure includes an annual cost for amortization of expen-

sive equipment necessary for the treatment of storm water and also the cost of chemicals.

C. BOAT DISCHARGES:

Lake Pontchartrain also receives bacterial and viral pollutants through the discharge of sewage by commercial and private water craft. Such discharges are unjustifiable given present technology.

Recommendation:

Within one year, the Louisiana Health and Human Resources Administration and the Louisiana Wildlife and Fisheries Commission should jointly determine acceptable means for the disposal or treatment of sewage on water craft. Within one year following such a determination the installation of such sewerage disposal or treatment equipment on all water craft equipped with heads should be required. All marinas should further be required, within the same time period, to submit and have approved plans to install facilities for the transfer of sewage wastes into approved land based disposal systems.

PROBLEM: River Pollution

Pollution of the Mississippi River is derived from three sources:

- a. municipal sewage discharges;
- b. agricultural and industrial wastes, and,
- c. salt water intrusion from the Gulf of Mexico.

Municipal, industrial, and agricultural discharges are the products of human activity. The pollution problem in this regard is addressed by the Federal Water Pollution Control Act which requires the elimination of pollution discharges by the early 1980's.

Industrial and agricultural pollution of the Mississippi River is documented and the incidence and concentrations of heavy metals and pesticides are attested to in numerous reports published by the U. S. Environmental Protection Agency. Vigorous enforcement of regulations pursuant to the Federal Water Pollution Control Act should minimize this problem by the Congressional target year 1983.

The Sewerage and Water Board of New Orleans with U. S. Environmental Protection Agency (EPA) grant assistance, is currently constructing secondary sewage treatment facilities. These facilities, costing approximately \$30 million, will effectively eliminate the discharge of municipal effluents into the Mississippi River from the City of New Orleans. If EPA were to make comparable levels of funding available to other Louisiana parishes bordering the Mississippi River and to all counties along the river above Louisiana, and mandate the construction of sewage treatment facilities in these areas, river pollution could be satisfactorily controlled.

Salt water intrusion into the Mississippi River is a natural occurrence associated with river discharge volumes which vary seasonally. Channellization and levee projects necessary for both navigation and flood protection, however, have altered natural processes, thus aggravating the salinity intrusion problem. As a result, salt water is intruding farther and farther up-river.

Salt water intrusion into the Mississippi River is potentially a significant threat because the river is the source of potable water for the City of New Orleans. The salt water wedge is approaching municipal water intake locations, and municipal water purification facilities are not equipped to purify saline water. It is unclear whether salt water would eventually foul city water supplies, however the possibility should not be ignored.

The Sewerage and Water Board of New Orleans has initiated a program to provide for an additional water intake further up the Mississippi River. The intake relocation is primarily to provide supplementary water supplies and to ensure a source of potable water in the event that the existing primary water intake is damaged. The estimated cost of this project is approximately \$8.5 million.

Recommendation:

Since the overall problem has been recognized and a solution is being diligently pursued it is recommended that the present course of action be continued. It is recommended that the goal of the Federal Water Pollution Control Act should be vigorously pursued and all regulations pursuant to the act should be strictly enforced.

It is further recommended that EPA make available to all local governing bodies the same levels of funding as made available to the City of New Orleans for sewage treatment facilities and impose similar timetables for implementation. Further, EPA should vigorously pursue the implementation of compliance measures to the Federal Water Pollution Control Act.

It is further recommended that the Sewerage & Water Board proceed expeditiously to construct an additional water intake to ensure that the City's water supply is not interrupted.

PROBLEM: Flooding

The threat of floods has traditionally plagued New Orleans. Not only is the threat of flooding a problem, but measures designed to reduce the threat often create additional problems. Specific problem areas related to flooding include:

1. Areas exterior to the levee system which are subject to normal tidal inundation;
2. Areas internal to the levees, and;
3. The flood protection system itself.

A. Areas Outside the Levees:

Areas subject to normal tidal unundation are outside of the hurricane protection system and are as yet substantially undeveloped. Problems associated with these areas are discussed under the "Wetland Development Pressures" section.

B. Areas Within the Levees:

Areas subject to storm-related flooding include all lands in Orleans Parish which are not only exterior to the hurricane protection system but also certain other areas internal to the levee system. The problem areas internal to the existing levee system are identified on the maps accompanying this report. Protection from flooding in these areas is accomplished by existing levees and by the City's drainage system. The City of New Orleans depends heavily on its levees and pumping stations. In the older areas of the city, pumping stations could be flooded and become inoperable should the levee system fail. Levee failure itself could be disastrous even if the pumps remain operable since the drainage system could not remove water as quickly as it enters the city via a break in the levee. Although the New Orleans Sewerage & Water Board is now constructing raised pumping stations, older pumps have neither been replaced nor raised. The Sewerage & Water Board, however, is now in the process of upgrading existing older pumping stations. This should be accomplished and costs for this project estimated by the Sewerage & Water Board are \$2,880,000. This project should "flood proof" pumping stations through the renovation of electrical systems and the provision of water proof emergency electrical sources. Correspondingly, it should be noted that some levees are not up to project design elevations and therefore should be raised. This should apply to all levees in the area, including river levees.

Recommendations:

1. As planned, all existing floodable pumping stations should be renovated in such a manner as to raise electrical components above projected flood levels. All pumping stations should be equipped with independent generators for emergency use.
2. All levees protecting the city should be elevated to project height and adequately maintained to ensure that failures do not occur, and there should be assurance that there will be continued financial support for the programs of the New Orleans Sewerage & Water Board and Board of Commissioners of the Orleans Levee District.

C. Flood Protection System:

A third problem associated with flooding is the provision of flood protection while, at the same time, avoiding or minimizing adverse environmental effects. The construction of levees around undeveloped areas destroys vast

acreages of wetland and encourages development in such areas. Additionally, by leveeing wetlands, economic losses occur by reducing wildlife and fisheries habitat and production. Wetlands also buffer storm tides and reduce hurricane damage. On the other hand, flood protection is needed for a population of over one million residing around the shores of Lake Pontchartrain. The cost in lives and property should severe flooding occur would be astronomical and therefore flood protection works designed to protect currently developed areas should be encouraged. At the present time, existing levees provide flood protection to developed areas of the City of New Orleans to the extent of about 100 year storm probability. Additionally, new hurricane protection works have been authorized by Congress and are now in the planning stage, which would extend such protection to the approximate level of a 200 year storm.

The proposed Lake Pontchartrain and vicinity Hurricane Protection Plan includes the construction of flood control structures at the Chef Menteur Pass and at The Rigolets. These structures are essentially tide gates designed to reduce tidal surges in Lake Pontchartrain. There is concern that the construction of these control structures will restrict the interchange of water between Lakes Pontchartrain and Borgne and slow water circulation and prevent benthic organisms from entering Lake Pontchartrain. Discussions with the U. S. Corps of Engineers, however, reveal their intent to enlarge the control structures from previous dimensions so as to maintain a 90% natural tidal flow and to design the structure's sills so as not to create a barrier to the movement of benthic organisms through the passes.

Recommendations:

1. That levee construction be restricted to those areas that have some protection now and which would permit some reasonable amount of growth.
2. That construction of the Lake Pontchartrain and vicinity Hurricane Protection Plan Control Structures should proceed, assuming a 90% tidal interchange can be maintained in the affected passes.
3. That flood protection, to a project storm level of 200 years, be provided.

PROBLEM: Wetland Development Pressures

Wetlands are under several types of development pressures. These pressures include:

- (A) Expansion of urban development.
- (B) Expansion of fishing camp developments.
- (C) Mineral exploration activities.

Wetland areas subject to development pressures are exterior to the levee system and are also prone to regular flooding through normal tidal action. If development is to be accommodated in these areas, building eleva-

tions must be of sufficient height to avoid flooding both during normal high tides and also during tropical storms. In order to accomplish this, buildings must either be constructed on elevated platforms or lots must be filled to proper elevation.

Another technique for avoiding flooding is the construction of levees. Both extensive filling and levee construction destroy viable wetlands and therefore should be discouraged in areas beyond the limits of those already constructed. Solely from an environmental conservation viewpoint, all development and construction should be prohibited in unleveed areas. This viewpoint, however, creates a conflict which must be resolved.

As alluded to in the foreword, there are few options left to the City except to contemplate a reasonable level of continued development (development needed should the city elect to retain and increase its percentage of middle income families residing in its geographical limits). A ceased development program could result in a further population decline, leaving a citizenry composed of the elderly, the handicapped, and low income or unemployed families. This would require a sharp increase in the demand for services with an erosion in the ability to financially support these demands.

Another alternative would be to contain development and increase density within the developed sections of the city. This approach has not met with positive response from the citizenry, but is recognized that those areas capable of sustaining increased density (such as Algiers, Uptown, Mid-City, and Lake-front areas) have zealously resisted zoning proposals permissive of an increased density. Many other areas, such as Central City, Marigny, the Garden District, Tremé and Algiers Point, not only have reflected a decline in population, but have expressed interest in stabilizing the area at a residential density below that currently permitted. This is reflected in the current interest in historical zoning districts and historic districts for architectural control.

Another option would foster the growth of the metropolitan area outside any environmentally sensitive areas. This concept, however, in the absence of strong regulatory measures where such development may occur, would tend to foster urban sprawl with the possibility of a more deleterious effect on the total environment and a worsening of current transportation problems. This has already been evidenced by development moving into fringe areas where land is cheaper because of excluded pre-service costs, and less restrictive construction standards which reduce building costs.

The ability to prevent or effectively limit the development of wetlands by regulatory action raises serious legal issues, and such efforts may be contrary to basic tenets of law imbedded in the state as well as the national constitution: "Confiscation without just compensation". Furthermore, total prohibitions could eliminate camp activities which are a way of life unique to coastal areas. A more realistic approach appears to be:

1. Seek public purchase of those properties most subjected to severe development pressures and where the ecological system is most strained;

2. Adopt regulations that will permit minimal development in areas which are not experiencing severe development pressures in a manner that will not unduly strain ecological systems and not simultaneously create legal impediments.

It is this dual approach which is reflected in this Coastal Zone Management Plan for the City of New Orleans.

Recommendations:

1. A. Undeveloped and unleveed wetland areas currently subject to severe development pressures should be immediately brought into public ownership. Areas recommended for acquisition include:

- (i) The unleveed wetlands west of Chef Menteur Pass, east of U. S. Highway 11, north of Bayou Sauvage but excluding the South Point/Irish Bayou area and its camps.

- (ii) The area between the Chef Menteur Pass and The Rigolets excluding those properties immediately adjacent to U. S. Highway 90, subject to the retention of all mineral rights and leases by the current owners.

- (iii) Remaining undeveloped parcels exterior to the levees system should eventually be acquired as fiscal resources become available.

- B. The cost for the total program above could possibly exceed \$15 million. The State Coastal Zone Management Plan should reflect these acquisitions and should outline steps for their inclusion into the public domain. Once acquired, the wetland areas should be preserved, and in some instances developed as limited recreational sites for the State's benefit in keeping with their natural condition.

- C. Those areas which are not recommended for acquisition or which may not be acquired in the immediate future should be subject to development restrictions incorporating the following standards (see appendix).

- (i) Not more than 5% of a tract or lot area may be developed.
 - (ii) All construction shall be elevated (to prohibit major restrictions of water flow) above flood elevations and should allow sunlight to penetrate underneath the structures.
 - (iii) Limit, if not prohibit, any sewerage discharge into wetland areas.
 - (iv) Limit the disturbance of wetlands during and after construction.

2. Camps as individual units in the aforementioned areas do not constitute a significant impact on the environment. When considered collectively in highly concentrated areas they do cause pollution problems, filling of wetlands, and in some instances roadside blight. Since camps have a part in the heritage and character of Coastal Orleans Parish, it is recommended that existing camps in the above be allowed to remain, but that they be upgraded by the recommendations of this report.

Included in the appendix is the draft of a proposed amendment to the zoning ordinance oriented to protect such areas but not to their utilization wholly in private ownership. It is recommended that said proposal be reviewed by all interested groups and individuals and formally be considered.

3. Mineral exploration activities should be strictly controlled by requiring that pipelines utilize existing waterways where possible. When this is not feasible canals should be designed to accommodate multi-lines and should have environmental measures (such as back-filling canals, etc.) incorporated in their plans. The Building Code should be amended to require these features.

PROBLEMS: Faults

The City of New Orleans and all of Coastal Louisiana is in a tectonically active region. The area is underlain by several existing (Type A) faults and probable (Type B) faults. (See map 1 for approximate location). The significance of these faults, as to whether they do or do not represent a potential danger, has not been determined.

Recommendation:

The State Coastal Zone Management Study should determine the significance of these fault lines which may affect coastal Louisiana and the New Orleans area and if deemed necessary, initiate steps to prevent or reduce potential hazards.

PROBLEM: Soil Conditions

Many areas of the City of New Orleans, both developed and undeveloped, are reclaimed wetlands having poor, unstable soils. Poor soils in the area tend to subside when drained and necessitate periodic refilling of lots. Structural damage to buildings and utilities may occur as a result of subsidence. Little can be done to ameliorate problems in already developed areas, however, the major impact of such subsidence has already occurred and acceptable compensatory measures are being used. Alternative construction and/or development techniques, however, can substantially reduce problems associated with poor soil conditions. These alternatives include:

(a) Use of a wet drainage (open canals, lagoons, and small ponds) method that lowers but maintains the water table at a specified level. The area being developed would be drained and the water table drawn down to the desired level; the land surface would then be allowed to subside to the point of becoming stable. Once surface organic soils have stabilized, the area would be filled with mineral soils and time would be allowed for stabilization. Only after a sufficient time period has been provided for stabilization would development be permitted to occur.

(b) Traditional "dry" drainage filling of an area would occur but in lieu of building on a slab, buildings would be constructed on small piers, as was the practice during earlier times. A desirable improvement of this alternative would be the placement of piers over foundation caps and pilings.

(c) A third alternative would entail drainage and filling as currently practiced but would require that no construction take place until the major portion of anticipated subsidence has ceased.

(d) A fourth alternative would entail drainage and filling as currently practiced but surcharging the land with approximately six feet of river sand to expedite the anticipated subsidence.

(e) A fifth alternative would be to encourage other land uses such as open space and recreation for those sections which might be subject to the most subsidence.

Recommendation:

1. The New Orleans Department of Safety and Permits should institute a study of alternative construction technologies to determine the best feasible construction techniques to be utilized in reclaimed wetland areas.

2. The Sewerage & Water Board should conduct a study of alternative drainage methods to determine which methods should be used in the leveed, but undeveloped areas.

PROBLEM: Loss or Damage to Archaeological Sites

Orleans Parish is rich in archaeological heritage. Currently, 35 archaeological sites are known to exist and local archaeologists believe that at least that many more remain as yet undiscovered. Archaeological sites are very valuable in terms of educational opportunity, local recreation, and as tourist attractions. Construction activities, natural processes, and vandalism often destroy these valuable assets. Every effort should be made to preserve these sites, and when preservation is not feasible to insure the recovery of their artifacts.

The New Orleans City Planning Commission and the Louisiana State Parks and Recreation Commission are currently exploring the possible acquisition of two important archaeological sites: Big and Little Oak Islands, both of which are briefly described in Volume I. The current property owner has offered these sites to the City of New Orleans. If acquired, these sites would become important educational and recreational facilities and should be linked together with a greenbelt or other open space feature (See map 2).

Recommendation:

1. The State, as part of the Coastal Zone Management Study, should conduct a survey of the entire city to determine the location of major

preservable sites and the existence of, as yet, unknown sites.

2. Appropriate legislation should be enacted to ensure the protection and acquisition of major sites and the recovery of artifacts from other sites. When construction activity uncovers an archaeological site, the contractor should be required to suspend operation for two days to allow for an archaeological examination. Should the site be of archaeological significance, the State of Louisiana should indemnify any losses due to a construction delay necessary to artifact recovery.

PROBLEM: Erosion

Rapid shoreline erosion along Lakes Pontchartrain and Borgne, especially between the Chef Menteur Pass and the Rigolets, is simultaneously destroying productive wetlands and reducing land area dimensions. Erosion ultimately reduces the effectiveness of wetlands as a natural buffer to storm generated waves and causes a net loss in habitat vital to the production of nutrients supportive of both commercial and sport fishing productivity. It is important therefore, to embark on an erosion abatement program. Erosion can be stopped or reduced through the employment of two alternative measures. First, the shoreline can be stabilized by the placement of rip-rap or the construction of levees or seawalls. While this first alternative would prevent erosion, it would also restrict or prevent nutrients from flowing into the eco-system and thus might be more damaging than the erosion itself. The second alternative, the construction of artificial barrier islands, would reduce erosion without destroying the land-water interface necessary to allow nutrients to disperse into the eco-system.

Recommendations:

1. Barrier islands, where most needed and feasible, should be constructed by the Corps of Engineers and the Board of Commissioners of the Orleans Levee District to prevent rapid shoreline erosion. These islands, once constructed, could be utilized as a recreational resource.

2. It is further recommended that the State of Louisiana, as a part of its Coastal Management Program, study the feasibility of diverting water from the Mississippi River in order to restore eroding marsh areas in Orleans Parish.

PROBLEM: Lack of Statewide Coastal Zone Management Legislation and Coordination

Legislation:

Several Coastal Zone Management bills have been introduced in the State Legislature since 1973. The Legislature, however, has yet to act on any such legislation.

In order for a Coastal Zone Management Program to be effective in one location, it must be a part of a regional or statewide program. Although this

report is limited to Orleans Parish, many recommendations suggest awareness on a larger or regional area if we are to obtain a reasonable level of protection of our coastal areas and not unduly burden those citizens of any one jurisdiction. This is important because the fragile coastal eco-system is affected by conditions and actions in other areas over which the affected jurisdiction has no control. (See map 3). Therefore, statewide coordination is needed for any successful Coastal Zone Management Program.

Recommendation on State Legislation:

It is recommended that the State Legislature adopt Coastal Zone Management measures encompassing the following:

1. That the State's Coastal Zone Management Program consist of three programs: management, long range planning, and long range research, all under the supervision of a Coastal Resources Commission.
2. That the Coastal Resources Commission membership contain not less than ten (10) members nor in excess of fifteen (15) members.
3. That parish Chief Executive Officers be authorized to designate a representative to serve on the Coastal Resources Commission. Such designee so represented be granted full membership powers with respect to issues affecting his parish. That the local representative have an initial veto over any proposal affecting said parish, with the veto capable of being over-ruled by the Commission on appeal after a 30 day delay and public hearing within the parish so affected.
4. That the Commission be granted the powers to promulgate rules, regulations, criteria and standards to properly manage the Coastal Zone.
5. That no rules, regulations, criteria, standards, etc. be promulgated which would affect existing rules, regulations, criteria, standards, etc. governing previously leveed or drained areas.
6. That the Commission be granted the powers to establish goals, priorities, and objectives for the Louisiana Coastal Zone after input from local governing bodies.
7. That local governing bodies be authorized to formulate, enact, and enforce local Coastal Zone Management plans which are formulated, enacted, and enforced under State guidelines and supervision, and that such local plans be incorporated into the State Coastal Zone Management Plan provided that such local plans are consistent with the objective of the Act.
8. That the Commission formulate guidelines and supervisory procedures to monitor local governing bodies who would be granted the power to hear and rule on permit application.

9. That the Commission formulate guidelines and supervisory procedures to monitor local governing bodies who would be granted the power to accept and administer funds and grants.

10. That the Commission formulate guidelines and supervisory procedures to monitor local governing bodies who would be granted the power to acquire land.

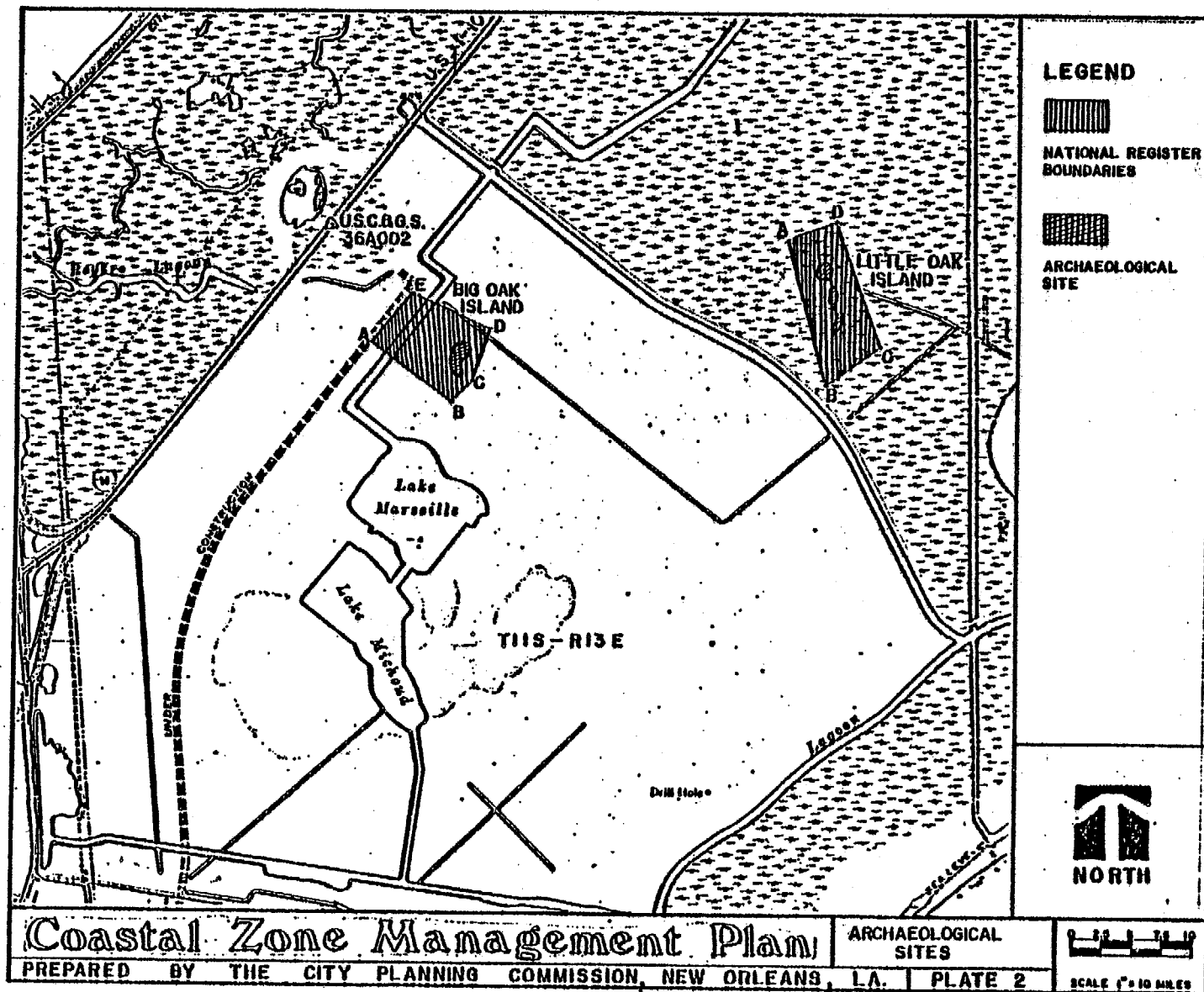
11. That an office of Coastal Zone Management within the Louisiana Wildlife and Fisheries Commission be established to aid the State Planning Office with long-range planning functions and to aid Louisiana State University with long-range research projects concerning the State's coastal zone.

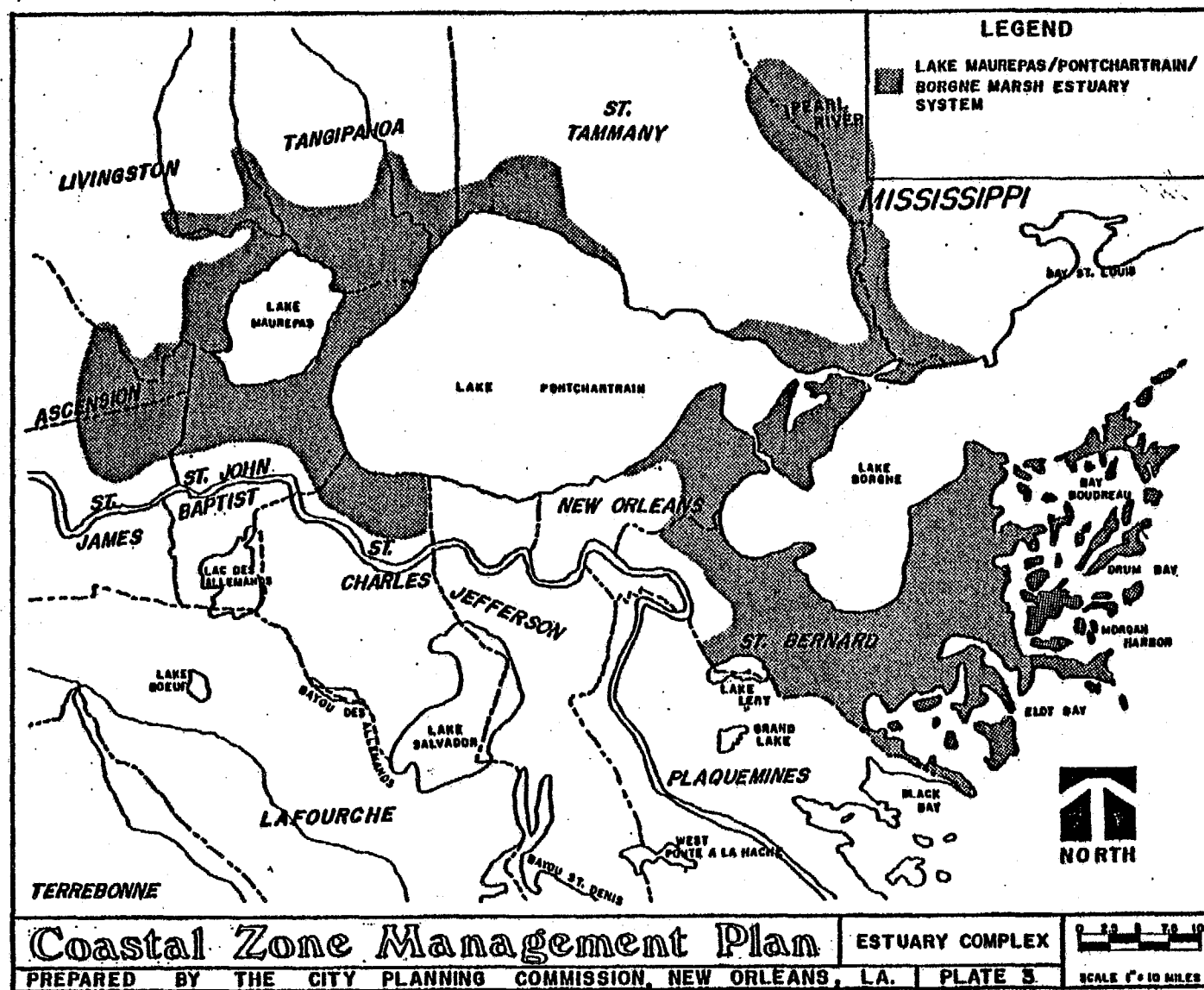
12. That all coastal zone regulatory functions be consolidated into a single regulatory agency.

14. That the authority vested in the Commission become effective only upon adoption of a Coastal Zone Management Plan (or part thereof) and upon adequate funding (both operational and capital) to permit plan implementation.

Recommendation on State Cooperation:

To facilitate coordination on the local level it is recommended that local governing bodies establish coordinating councils made up of government officials and representatives of appropriate academic disciplines. In the case of New Orleans, it is suggested that the Planning Advisory Committee might be expanded to include representatives of appropriate Federal and State agencies and academic disciplines and therefore act as such a coordinating council. This council could act as a local clearinghouse for reviewing permit applications and land use proposals. This council could also coordinate the administration and enforcement of regulations or, at a minimum, serve as an advisory agent to the City Administration and City Council.





3

Epilogue

EPILOGUE:

This Coastal Zone Management Plan for the City of New Orleans establishes a framework and direction from which to base additional study and implementation actions necessary to enhance the quality of the natural environment. The approach taken is one which is designed to protect property owners while, at the same time, allow maximum human use of the natural environment in a way which minimally disrupts the natural system. The recommendations of this report should be utilized as a guide to future Coastal Zone Management decisions at all governmental levels.

This report should not signal the end of Coastal Zone Planning in New Orleans, but rather this report should act as a stimulus for further studies aimed at establishing an environmental management system.

Should this report, after due public hearings be determined to be in the public interest, the New Orleans City Planning Commission could consider its adoption as a report of the Commission and direct its staff to do the following:

1. Use said report to guide and direct land use, development, and capital program evaluations.
2. Seek councilmanic approval to consider amending the Zoning Ordinance.
3. Pursue inclusion of necessary studies within the Coastal Zone Management Study as well as studies called for by other agencies.
4. Pursue funding sources for implementing recommendations contained in this report.
5. Support necessary State Legislation to implement the Coastal Zone Management Program for the City of New Orleans.

Throughout this endeavor there has been an awareness of the multiplicity of federal regulations involved in Coastal Zone Management. This included Congressional Acts, departmental regulations, court rulings, and financial programs. Many of these actions were conceived to relieve current problems or to promote a more desirable environment. Yet there are distinct indications that the collective impact is not attaining these goals and, in fact, may be contributing to a move in the opposite direction. Examples:

a) financial programs for single-family low density sprawl is readily available, but financial programs for the maintenance and retention of the current housing stock is limited at best.

b) funds for highway construction are known to be budgeted and are capable of being programmed, yet the bulk of existing transit funds are dependent on inter-city competition and "grantsmanship".

c) large scale planned developments are subject to a multiplicity of reviews and regulations, yet many small scale sprawl and piece-meal developments escape all but minimal reviews.

Although Congress has in recent years reflected an interest in the issue of land use, this has not materialized in any positive action. It is strongly urged that a major task force, highly representative of urbanized areas, be formed to evaluate existing programs and policies, to formulate goals and objectives, and to recommend legislation for the achievement thereof.

4 Appendices

ORDINANCE
CITY OF NEW ORLEANS

CITY HALL _____

CALENDAR NO. _____

NO. _____ MAYOR COUNCIL SERIES

BY: _____

AN ORDINANCE to amend Ordinance No. 4264 M. C. S., known and referred to as the Comprehensive Zoning Law of the City of New Orleans, being an Ordinance to protect and conserve the remaining natural and environmentally sensitive areas within the City of New Orleans to ensure a sound and wise balance between their development and their preservation and continued viability as renewable economic, recreation and open space resources through the creation of a "CM-Coastal Management District".

SECTION 1. THE COUNCIL OF THE CITY OF NEW ORLEANS HEREBY ORDAINS, that Ordinance No. 4264 M. C. S., known and referred to as the Comprehensive Zoning Law of the City of New Orleans, be, and it is hereby amended by inserting in Article 5, the following section designated Section 30:

SECTION 30. "CM-Coastal Management District".

30.1 Purpose of the District

The purpose of this district is to provide a classification for those coastal areas of a marsh, wetland, estuary or waterway nature which are in a natural or pristine state or which have been minimally impacted by man or the works of man; which, by their nature, provide refuge or habitat for species of wildlife, fowl, and fisheries; or which provide or affect sources of sustenance for species of wildlife, fowl, and fisheries, either directly or indirectly; and further to assure that land uses permitted in the district are consistent with traditional development in these areas and are designed to ensure the continued environmental and ecological viability of natural processes operating within the district.

30.2 Permitted Uses

A building or land shall be used only for the following purposes subject to: 1) a maximum lot coverage for all structures, of 5%; 2) the first floor elevation shall meet the minimum elevation required under Chapter 32 of the Code of the City of New Orleans, (Ord. 828 M. C. S.) - Land Use and Control Measures; 3) that the building or land use shall not totally interfere with the land's

exposure to sunlight and rain, or will not disrupt the natural current and tidal flows, and that the area under the first floor elevation shall not be used for storage purposes or parking of vehicles (less and except the mooring of a boat) unless the natural ground elevation is above the mean high tide; 4) that no filling of the land and no excavation or dredging is permitted except as otherwise provided for in Section 30.4 Permitted Conditional Uses; 5) that there is only a minimal discharge of human waste material into wetlands with provision for the installation of a holding tank or an electric head (reducer) as may be required by the Department of Health;

1. Public and private open space areas, wildlife reservations, and similar conservation projects.
2. Public or private fishing or hunting preserves.
3. Single family residences or fishing camps.
4. Two family residences.
5. Multi-family residences.
6. Townhouses.
7. Private clubs, lodges, and/or meeting halls, excepting those the chief activity of which is a service customarily carried on as a business.

30.3 Permitted Accessory Uses and Signs

1. Any accessory uses and sign permitted in RS-1 and RS-2 Single Family Residential Districts.

30.4 Permitted Conditional Uses

In order to provide for certain uses, which may be desirable to be located in Coastal Management Districts but which because of their unique characteristics may expose said area to strain, the City Council under the provisions of Article 15 and specifically Section 2.6 shall authorize the following conditional uses:

When it is determined by the City Council that such conditional uses will promote the public welfare, public safety, and public health, and that the proposal is in general compatibility with adjacent or nearby land uses, applications for the following conditional uses shall be transmitted to the City Planning Commission for a public hearing and action in accord with the provisions of Article 15 and subject to:

- a) a maximum lot coverage for all structures, of 5%;
- b) the first floor elevation shall meet the minimum elevation required under Chapter 32 of the Code of the City of New Orleans, (Ord. 828 M. C. S.) - Land Use and Control Measures;

- c) that the building or land use shall not totally interfere with the land's exposure to sunlight and rain, or will not disrupt the natural current and tidal flows, and that the area under the first floor elevation shall not be used for storage purposes or parking of vehicles (less and except the mooring of a boat) unless the natural ground elevation is above the mean high tide;
- d) that no filling of the land and no excavation or dredging is permitted except as otherwise provided for in Section 30.4 Permitted Conditional Uses;
- e) that there is no discharge of human waste material into wetlands with provision for the installation of a holding tank or an electric head (reducer) as may be required by the Department of Health;
- f) compliance with the Performance Standards of Article 5, Section 20;
 1. Any permitted use which may involve excavation, dredging or filling for any purpose.
 2. Those commercial uses, accessory uses and signs permitted in a B-1 Neighborhood Business District.
 3. Those industrial uses, accessory uses and signs permitted in a LI Light Industrial District.
 4. Mixed commercial/residential or mixed industrial/residential uses, accessory uses and signs permitted in the B-1 and LI Districts respectively.

30.5 Height, Area and Bulk Requirements

The maximum height of structures is 50 feet above mean sea level or ground elevation or 35 feet above the first floor elevation whichever is the lesser.

30.6 Off-Street Parking and Loading Regulations

Where road access is available, off-street parking spaces for residential uses shall be provided on a 1:1 ratio; i.e. 1 parking space for each dwelling unit (to be included in the 5% lot coverage).

Where road access is available, off-street parking and loading spaces for commercial and industrial uses shall be provided for as indicated in the Tables of Article 7 and 8 for low density districts (to be included in the 5% lot coverage).

Where road access is not available, off-street parking may be waived or required at an off-site location where road access is available.

30.7 Reference to Additional Regulations

The regulations contained in this Article are supplemented or modified by regulations contained in other Articles of this Ordinance, especially the following:

- Article 9. Regulations for Large-Scale Developments.
- Article 13. Board of Adjustments, Exceptions and Variances.
- Article 14. Definitions.
- Article 15. Administrative Provisions.

Article 3, Districts and District Maps.

Under Special Districts include: CM-Coastal Management District

Under Special Historic Districts include:

- HMR-1 and 2 Historic Marigny Residential Districts
- HMC-1 and 2 Historic Marigny Commercial Districts

Article 13, Board of Adjustments, Exceptions and Variances.

Section 10 Special Exceptions.

Second paragraph: Delete in its entirety and substitute in lieu thereof:

"Special Exceptions may not be granted for Conditional uses, Large Scale Developments (Residential Planned Community, Shopping Center or Special Industrial) which are approved by the City Council, or for Coastal Management District Permitted Uses."

Section 11. Variances.

Item 3, delete in its entirety and substitute in lieu thereof:

"The development standards of Conditional Uses, Large-Scale Developments (Residential Planned Community, Shopping Center, or Special Industrial District) and Coastal Management District Permitted Uses shall not be subject to waivers, variances or exceptions that could be granted under the provisions of Article XIII, Board of Zoning Adjustments.

ADOPTED BY THE CITY COUNCIL OF THE CITY OF NEW ORLEANS

PRESIDENT OF COUNCIL

Delivered to the Mayor on _____

Approved:

Disapproved: _____

MAYOR

Returned by the Mayor

on _____ at _____

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BOBBIE L. ABERNATHY - PRINCIPAL PLANNER

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RICHARD REDMANN	ASSOCIATE PLANNER

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SUSAN MARSTON	PLANNING AIDE

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KARL HELWICK	DRAFTSMAN II TITLE II
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